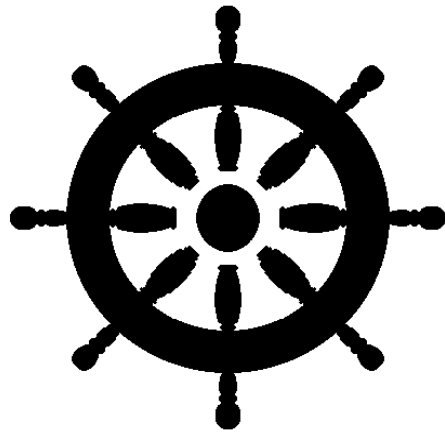


CHAPTER 66



QUARTERMASTER (QM)

NAVPERS 18068-66E

CH-67

Updated: July 2016

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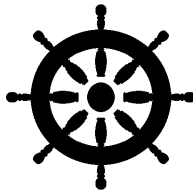
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NAVY ENLISTED OCCUPATIONAL STANDARDS

FOR

QUARTERMASTER (QM)



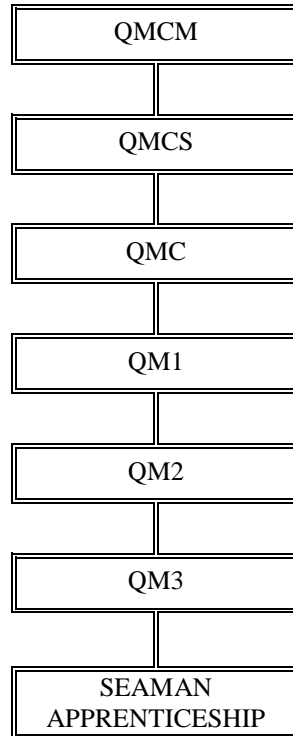
SCOPE OF RATING

Quartermasters (QM) stand watch as assistants to the Officer of the Deck (OOD) and the Navigator; serve as Helmsman; perform ship control, navigation, and bridge watch duties; procure, correct, use, and stow navigational and oceanographic publications and charts; maintain navigational instruments and keep correct navigational time; perform weather data observations and data encoding; perform tactical communications using visual, audible, and electronic methods; and render honors and ceremonies in accordance with national observances and foreign customs.

This Occupational Standard is to be incorporated in Volume I, Part B, of the Manual of Navy Enlisted Manpower and Personnel Classifications and Occupational Standards (NAVPERS 18068F) in Chapter 66.

GENERAL INFORMATION

CAREER PATTERN



Normal path of advancement to Chief Warrant Officer and Limited Duty Officer categories can be found in OPNAVINST 1420.1.

For rating entry requirements, refer to MILPERSMAN 1306-618.

SAFETY

The observance of Operational Risk Management (ORM) and proper safety precautions in all areas is an integral part of each billet and the responsibility of every Sailor; therefore, it is a universal requirement for all ratings.

Job Title**Navigation Administrator****Job Code****003743****Job Family**

Transportation and Material Moving

NOC

TBD

Short Title (30 Characters)

NAVIGATION ADMINISTRATOR

Short Title (14 Characters)

NAVIGATN ADMIN

Pay Plan

Enlisted

Career Field

QM

Other Relationships and Rules

As assigned to Job

Job Description

Navigation Administrators provide navigation expertise to shipboard personnel and advise during unusual navigational conditions in accordance with fleet directives; use all charted visual aids to navigation and tides and current data; select, use and correct nautical charts; maintain chart allowance inventories; prepare synoptic observation messages; maintain and review equipment and navigation logs; extract and record maintenance data from appropriate navigation publications; prepare weekly and quarterly schedules of preventive maintenance ensuring they are implemented; and coordinate shipboard honors and ceremonies and execute sunrise, morning, and evening colors.

DoD Relationship**Group Title**

Navigators

DoD Code

106100

O*NET Relationship**Occupation Title**

Pilots, Ship

SOC Code

53-5021.03

Job Family

Transportation and Material Moving

Skills*Mathematics**Science**Operation and Control**Reading Comprehension**Complex Problem Solving**Coordination**Judgment and Decision Making**Writing**Critical Thinking**Systems Evaluation***Abilities***Deductive Reasoning**Mathematical Reasoning**Information Ordering**Finger Dexterity**Problem Sensitivity**Written Comprehension**Written Expression**Manual Dexterity**Category Flexibility**Speed of Closure***COMMUNICATIONS****Paygrade**

E4

Task Type

CORE

Task Statements

Perform communications using tactical signals

E4

NON-CORE

Perform external communications (ship-to-ship, ship-to-shore)

ELECTRONIC SYSTEMS OPERATIONS**Paygrade**

E4

Task Type

CORE

Task Statements

Maintain electronic navigation systems

E4

CORE

Navigate ship using electronic navigation systems

E4

CORE

Prepare electronic navigation systems

E4

CORE

Shutdown electronic navigation systems

E4

CORE

Startup electronic navigation systems

E4

CORE

Verify helm and lee helm operations

E4

CORE

Verify ship's position data between sources (radar, paper, Voyage Management System (VMS))

EQUIPMENT ADMINISTRATION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	NON-CORE	Inventory controlled equipment
E6	NON-CORE	Manage controlled equipment inventories
E4	CORE	Perform preventive maintenance on navigation equipment

LOOKOUT AND SIGNALING OPERATIONS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Identify lights and beacons using stopwatch
E4	CORE	Maintain halyards, halyard blocks, and tie downs
E4	NON-CORE	Perform man overboard procedures
E4	CORE	Prepare weather observation reports
E4	CORE	Report audible and visual information (e.g. sound signals, lights, flags, etc.)
E4	CORE	Report flags (country flags, signal flags)

NAVIGATION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Adjust radar scope presentation to align with navigation charts
E6	CORE	Calculate advanced maneuvering board solutions (e.g. station changes, avoidance courses, etc.)
E4	CORE	Calculate basic maneuvering board solutions (e.g. winds, Closest Point of Approach (CPA), etc.)
E4	CORE	Calculate celestial event times (e.g. sunrise/sunset, moonrise/moonset, twilight, etc.)
E4	CORE	Calculate compensating and correcting courses and speeds
E4	CORE	Calculate set and drift
E4	CORE	Compare fathometer readings to charted depth
E4	CORE	Compute course and speed made good
E4	CORE	Compute expected times of radar landfall
E4	CORE	Compute gyro error
E4	CORE	Compute tides and currents
E5	CORE	Compute visibility of lights and expected times of sighting
E4	CORE	Compute Zone Time (ZT) using Zone Description (ZD)
E4	CORE	Convert arc to time and time to arc
E4	CORE	Correlate lookout information with radar presentations
E4	CORE	Determine latitude and longitude from plotted positions on navigational charts
E4	CORE	Determine magnetic compass errors using gyrocompass
E4	CORE	Determine required Speed Of Advance (SOA)
E4	CORE	Determine ship's position (e.g. electronic, visual, radar, etc.)
E4	CORE	Determine ship's position relative to Plan of Intended Movement (PIM)
E4	CORE	Determine variation on charts
E4	CORE	Graph tides and currents

NAVIGATION (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Incorporate lookout information with navigation plot
E4	CORE	Make Movement Reports (MOVREP)
E4	CORE	Make position reports
E4	CORE	Make weather reports
E4	CORE	Measure distances on navigational charts
E4	CORE	Navigate ship during reduced visibility
E4	CORE	Plot Dead Reckoning (DR) tracks
E4	CORE	Plot ship's position during navigation detail
E4	CORE	Plot ship's position using visual bearings
E4	CORE	Prepare bridge for special evolutions
E4	CORE	Report aids to navigation
E4	CORE	Report Navigation Rules and Regulations signals (e.g. task lights, day shapes, sound signals, etc.)
E4	CORE	Shift navigation control to secondary location
E4	NON-CORE	Steer ship using aft steering
E6	CORE	Supervise shift of navigation control from bridge to secondary location
E4	CORE	Verify ship's position data in the Combat Information Center (CIC)

PLOTTING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Calculate danger bearings and ranges
E4	CORE	Calculate relative bearings
E4	CORE	Compute advance and transfer
E4	CORE	Compute anchor chain scopes
E4	CORE	Compute Estimated Time of Arrival (ETA)
E4	CORE	Plan anchorage areas
E4	CORE	Plot advance and transfer
E4	CORE	Plot great circle sailing routes
E4	CORE	Plot man overboard positions
E4	CORE	Plot mine warfare information
E4	CORE	Plot Plan of Intended Movement (PIM) tracks
E4	CORE	Plot weather message information
E4	CORE	Prepare restricted water tracks
E5	CORE	Recommend great circle sailing routes
E5	CORE	Review navigational charts
E4	CORE	Verify water depth is safe for navigation

TECHNICAL ADMINISTRATION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Analyze environmental hazards utilizing Protective Measures Assessment Protocol (PMAP) program
E5	CORE	Archive electronic navigation data
E5	CORE	Coordinate shipboard honors and ceremonies
E4	CORE	Correct navigational charts (paper, electronic)
E4	CORE	Execute sunrise, morning and evening colors
E4	CORE	Extract information from Naval and navigation publications, technical briefs, notices, and bulletins
E4	CORE	Maintain administrative records (i.e. deck logs, position logs, bearing books, etc.)
E4	CORE	Maintain chart and publication allowances
E5	NON-CORE	Manage administrative programs
E4	NON-CORE	Prepare navigation briefs
E6	CORE	Verify navigational charts

Job Title**Navigation Specialist****Job Code****003744****Job Family**

Transportation and Material Moving

NOC

TBD

Short Title (30 Characters)

NAVIGATION SPECIALIST

Short Title (14 Characters)

NAVIGATN SPEC

Pay Plan

Enlisted

Career Field

QM

Other Relationships and Rules

As assigned to Job

Job Description

Navigation Specialists stand watch as assistants to the Officer of the Deck (OOD) and the Navigator; perform ship control, navigation, and bridge watch duties; select charts for voyage planning; determine danger angles and danger bearings; use and update sailing directions, light lists, coastal pilots, and related publications and navigation charts; use Coast Guard publications concerning nautical rules and regulations; use basic course plotting instruments, lead lines, depth sounders, and compasses; maintain the compass book; determine ship's position by celestial observations; identify aids to navigation; serve as weather observers; recognize the significance of dew point, relative humidity, temperature, atmospheric pressure, wind force and direction, cloud formation, and sea state in general weather forecasting, and maintain the weather observation sheet; and handle plain language radio communications and visual communications. Experienced Navigation Specialists supervise bridge personnel.

DoD Relationship**O*NET Relationship****Group Title**

Navigators

DoD Code

106100

Occupation Title

Pilots, Ship

SOC Code

53-5021.03

Job Family

Transportation and Material Moving

Skills*Mathematics**Science**Operation and Control**Critical Thinking**Reading Comprehension**Coordination**Complex Problem Solving**Writing**Judgment and Decision Making**Systems Evaluation***Abilities***Deductive Reasoning**Mathematical Reasoning**Finger Dexterity**Information Ordering**Manual Dexterity**Problem Sensitivity**Written Comprehension**Written Expression**Category Flexibility**Perceptual Speed***COMMUNICATIONS****Paygrade****Task Type****Task Statements**

E4

CORE

Perform communications using tactical signals

E4

NON-CORE

Perform external communications (ship-to-ship, ship-to-shore)

E4

CORE

Signal water craft or boats (visually, audibly)

E4

NON-CORE

Test internal and external communications systems (visual, audible, electronic)

ELECTRONIC SYSTEMS OPERATIONS**Paygrade****Task Type****Task Statements**

E4

NON-CORE

Adjust ship's lighting for night operations

E4

CORE

Configure navigation and task lights

E4

CORE

Maintain electronic navigation systems

E4

CORE

Navigate ship using electronic navigation systems

E4

CORE

Prepare electronic navigation systems

E4

CORE

Shutdown electronic navigation systems

E4

CORE

Startup electronic navigation systems

E4

CORE

Verify helm and lee helm operations

E4

CORE

Verify ship's position data between sources (radar, paper, Voyage Management System (VMS))

EQUIPMENT ADMINISTRATION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	NON-CORE	Inventory controlled equipment
E4	CORE	Perform preventive maintenance on navigation equipment

LOOKOUT AND SIGNALING OPERATIONS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Identify lights and beacons using stopwatch
E4	CORE	Maintain halyards, halyard blocks, and tie downs
E4	NON-CORE	Perform man overboard procedures
E4	CORE	Prepare weather observation reports
E4	CORE	Report audible and visual information (e.g. sound signals, lights, flags, etc.)
E4	CORE	Report contacts (air, surface)
E4	CORE	Report flags (country flags, signal flags)

NAVIGATION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Adjust radar scope presentation to align with navigation charts
E4	CORE	Calculate basic maneuvering board solutions (e.g. winds, Closest Point of Approach (CPA), etc.)
E4	CORE	Calculate celestial event times (e.g. sunrise/sunset, moonrise/moonset, twilight, etc.)
E4	CORE	Calculate compensating and correcting courses and speeds
E4	CORE	Calculate set and drift
E4	CORE	Compare fathometer readings to charted depth
E4	CORE	Compute course and speed made good
E4	CORE	Compute expected times of radar landfall
E4	CORE	Compute gyro error
E4	CORE	Compute tides and currents
E5	CORE	Compute visibility of lights and expected times of sighting
E4	CORE	Compute Zone Time (ZT) using Zone Description (ZD)
E4	CORE	Convert arc to time and time to arc
E4	CORE	Correlate lookout information with radar presentations
E4	CORE	Determine latitude and longitude from plotted positions on navigational charts
E4	CORE	Determine magnetic compass errors using gyrocompass
E4	CORE	Determine required Speed Of Advance (SOA)
E4	CORE	Determine ship's position (e.g. electronic, visual, radar, etc.)
E4	CORE	Determine ship's position relative to Plan of Intended Movement (PIM)
E4	CORE	Determine variation on charts
E4	CORE	Graph tides and currents
E4	CORE	Incorporate lookout information with navigation plot
E4	CORE	Make Movement Reports (MOVREP)

NAVIGATION (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Make position reports
E4	CORE	Make weather reports
E4	CORE	Measure distances on navigational charts
E4	CORE	Navigate ship during reduced visibility
E4	CORE	Obtain visual bearings using alidades
E4	CORE	Plot Dead Reckoning (DR) tracks
E4	CORE	Plot ship's position during navigation detail
E4	CORE	Plot ship's position using visual bearings
E4	CORE	Prepare bridge for special evolutions
E4	CORE	Report aids to navigation
E4	CORE	Report Navigation Rules and Regulations signals (e.g. task lights, day shapes, sound signals, etc.)
E4	CORE	Shift navigation control to secondary location
E4	NON-CORE	Steer ship using aft steering
E4	CORE	Verify ship's position data in the Combat Information Center (CIC)

PLOTTING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Calculate danger bearings and ranges
E4	CORE	Calculate relative bearings
E4	CORE	Compute advance and transfer
E4	CORE	Compute anchor chain scopes
E4	CORE	Compute Estimated Time of Arrival (ETA)
E4	CORE	Determine type of ocean bottom
E4	CORE	Plan anchorage areas
E4	CORE	Plot advance and transfer
E4	CORE	Plot anchorage area
E4	CORE	Plot danger bearings and ranges
E4	CORE	Plot distress signals, bearings, and ranges
E4	CORE	Plot great circle sailing routes
E4	CORE	Plot man overboard positions
E4	CORE	Plot mine warfare information
E4	CORE	Plot navigation hazards
E4	CORE	Plot navigation points
E4	CORE	Plot pickup and drop-off points
E4	CORE	Plot Plan of Intended Movement (PIM) tracks
E4	CORE	Plot relative bearings
E4	CORE	Plot surface contact information

PLOTTING (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Plot swept channels
E4	CORE	Plot weather message information
E4	CORE	Prepare restricted water tracks
E5	CORE	Recommend great circle sailing routes
E5	CORE	Review navigational charts
E4	CORE	Verify water depth is safe for navigation

TECHNICAL ADMINISTRATION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Correct navigational charts (paper, electronic)
E4	CORE	Execute sunrise, morning and evening colors
E4	CORE	Extract information from Naval and navigation publications, technical briefs, notices, and bulletins
E4	CORE	Maintain chart and publication allowances
E4	NON-CORE	Prepare navigation briefs

Job Title**Navigation Manager****Job Code****003745****Job Family**

Transportation and Material Moving

NOC

TBD

Short Title (30 Characters)

NAVIGATION MANAGER

Short Title (14 Characters)

NAVIGATN MGR

Pay Plan

Enlisted

Career Field

QM

Other Relationships and Rules

As assigned to Job

Job Description

Navigation Managers provide navigation and piloting expertise to bridge personnel; advise during unusual navigational conditions in accordance with fleet directives and conduct navigation briefs; select and use appropriate nautical charts; select anchorages; employ appropriate electronic navigation systems; plan emergency drills; and evaluate personnel in the Navigation department.

DoD Relationship**O*NET Relationship****Group Title**

Navigators

DoD Code

106100

Occupation Title

Pilots, Ship

SOC Code

53-5021.03

Job Family

Transportation and Material Moving

Skills*Mathematics**Operation and Control**Coordination**Judgment and Decision Making**Science**Systems Evaluation**Quality Control Analysis**Writing**Complex Problem Solving**Monitoring***Abilities***Deductive Reasoning**Problem Sensitivity**Information Ordering**Manual Dexterity**Mathematical Reasoning**Written Comprehension**Perceptual Speed**Written Expression**Category Flexibility**Inductive Reasoning***ELECTRONIC SYSTEMS OPERATIONS****Paygrade****Task Type****Task Statements**

E4

CORE

Maintain electronic navigation systems

E4

CORE

Navigate ship using electronic navigation systems

E4

CORE

Prepare electronic navigation systems

E4

CORE

Shutdown electronic navigation systems

E4

CORE

Startup electronic navigation systems

E4

CORE

Verify helm and lee helm operations

E4

CORE

Verify ship's position data between sources (radar, paper, Voyage Management System (VMS))

EQUIPMENT ADMINISTRATION**Paygrade****Task Type****Task Statements**

E6

NON-CORE

Manage controlled equipment inventories

E7

CORE

Manage equipment certifications and recertifications

E7

NON-CORE

Verify equipment installation, testing, and alterations

LOOKOUT AND SIGNALING OPERATIONS**Paygrade****Task Type****Task Statements**

E4

NON-CORE

Perform man overboard procedures

NAVIGATION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Adjust radar scope presentation to align with navigation charts
E6	CORE	Calculate advanced maneuvering board solutions (e.g. station changes, avoidance courses, etc.)
E4	CORE	Calculate basic maneuvering board solutions (e.g. winds, Closest Point of Approach (CPA), etc.)
E4	CORE	Calculate celestial event times (e.g. sunrise/sunset, moonrise/moonset, twilight, etc.)
E4	CORE	Calculate compensating and correcting courses and speeds
E4	CORE	Correlate lookout information with radar presentations
E4	CORE	Determine required Speed Of Advance (SOA)
E4	CORE	Determine ship's position relative to Plan of Intended Movement (PIM)
E4	CORE	Incorporate lookout information with navigation plot
E4	CORE	Make Movement Reports (MOVREP)
E4	CORE	Make position reports
E4	CORE	Make weather reports
E4	CORE	Navigate ship during reduced visibility
E4	CORE	Plot ship's position during navigation detail
E6	CORE	Supervise bridge team during special evolutions (e.g. Underway Replenishments (UNREP), sea and anchor details, navigation details, etc.)
E6	CORE	Supervise shift of navigation control from bridge to secondary location
E4	CORE	Verify ship's position data in the Combat Information Center (CIC)

PLOTTING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Compute advance and transfer
E4	CORE	Plan anchorage areas
E5	CORE	Recommend great circle sailing routes
E5	CORE	Review navigational charts
E4	CORE	Verify water depth is safe for navigation

TECHNICAL ADMINISTRATION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Analyze environmental hazards utilizing Protective Measures Assessment Protocol (PMAP) program
E5	CORE	Archive electronic navigation data
E5	CORE	Coordinate shipboard honors and ceremonies
E4	CORE	Extract information from Naval and navigation publications, technical briefs, notices, and bulletins
E5	NON-CORE	Manage administrative programs
E4	NON-CORE	Prepare navigation briefs
E6	CORE	Verify navigational charts